



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,767	10/14/2003	James R. Mujwid	6683.69USU1	6331

43541 7590 01/24/2006

FAEGRE & BENSON  
ATTN: PATENT DOCKETING  
2200 WELLS FARGO CENTER  
90 SOUTH 7TH STREET  
MINNEAPOLIS, MN 55402-3901

EXAMINER

REIMERS, ANNETTE R

ART UNIT	PAPER NUMBER
----------	--------------

3733

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/685,767

Applicant(s)

MUJWID ET AL.

Examiner

Annette R. Reimers

Art Unit

3733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 2005 and 16 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,9,11-15,17-19 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,11-15, 17-19 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/21/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 7, 9, 11-12, 17-19, and 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Suddaby (U.S. Patent Number 6,332,895).

Suddaby discloses an expandable intervertebral implant comprising an external member, 10, including an external base wall and first and second external walls extending from the external base wall (see figure 1) and an internal member, 12, including an internal base wall and first and second internal walls extending from the internal base wall (see figure 1). The internal member also includes a flexible region extending along a length of the internal member permitting flexure of the interlocking teeth structure, wherein the flexible region allows the interlocking teeth structure formed on the first wall of the internal member to flex toward and away from the first wall of the external member (see figures 1-3).

The expandable intervertebral implant further includes a locking arrangement configured to lock the implant in an expanded configuration against a compressive force applied to the internal and external members along a direction opposite the direction of

Art Unit: 3733

expansion (see column 3, lines 40-49, column 4, lines 29-34, and figure 3), wherein the locking arrangement including a first configuration of adjustably engaged teeth formed on each of the first and second external walls, the first configuration of teeth being raked in an upward direction (see figure 3) and a second configuration of teeth formed on each of the first and second internal wall, the second configuration of teeth being raked in a downward direction (see figure 3). The engagement surfaces of the interlocking teeth structures are arranged in a non-perpendicular orientation relative to the first wall of the external and internal members (see figures 1-3).

The internal member includes a pair of arcuate slots/arcuate portions (see arcuate slots formed at 30) along the length of the internal member, wherein the slots define a flexible region in the internal member positioned adjacent the slots and between the internal base wall and each of the first and second internal wall to permit lateral displacement of the first and second internal walls (see figures 1-3). The internal member further comprises shoulder portions each having a surface generally perpendicular to the direction of expansion, wherein at least a portion of a shoulder and at least a portion of the arcuate portion define an arcuate gap therebetween that extends along a length of the shoulder to form the flexible region (see figure 1). In addition, at least a portion of the arcuate portion and at least a portion of the shoulder portion define an arcuate slit therebetween (see figure 1). Furthermore, the two shoulder portions are disposed on opposite sides of the arcuate portion when viewed in the direction of expansion (see figures 1-3).

The external member is capable of being of a rigid construction and the internal member is capable of being of a flexible construction (see column 4 lines 59-64). The first wall of the external member has an external wall thickness greater than the internal wall thickness of the internal member (see figure 1).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suddaby (U.S. Patent Number 6,332,895).

Suddaby discloses the claimed invention except for the engagement surfaces of the interlocking teeth structure formed on the external member and the internal member raked upwardly and downwardly about 4 degrees, respectively, the upwardly and downwardly raked configuration of teeth having a rake angle of between 1-8 degrees relative to the first and second walls of the external and internal members, and where the engagement surfaces of the interlocking teeth structure formed on the internal and external members is angled approximately 94 degrees relative to the respective first wall, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Suddaby with the engagement surfaces of the interlocking teeth structure formed on the external member and the internal

Art Unit: 3733

member raked upwardly and downwardly about 4 degrees, respectively, the upwardly and downwardly raked configuration of teeth having a rake angle of between 1-8 degrees relative to the first and second walls of the external and internal members, and where the engagement surfaces of the interlocking teeth structure formed on the internal and external members is angled approximately 94 degrees relative to the respective first wall, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 6, Suddaby discloses the claimed invention except for the interlocking teeth structure being formed only on the inside wall surface of the external member and only on the outside wall surface of the internal member. It would have been an obvious matter of design choice to construct the device of Suddaby with the interlocking teeth structure being formed only on the inside wall surface of the external member and only on the outside wall surface of the internal member, since applicant has not disclosed that having the interlocking teeth structure being formed only on the inside wall surface of the external member and only on the outside wall surface of the internal member solves any stated problem or is for any particular purpose, and it appears that the invention would perform equally well with interlocking teeth structure being formed on both sides of the internal and external members.

### ***Response to Arguments***

Applicant's arguments filed December 2, 2005 have been fully considered, but they are not persuasive. Upon further consideration, amendments to the claims do not further place the application in condition for allowance, because the Suddaby reference includes an internal member having a flexible region extending along a length of the internal member permitting flexure of the interlocking teeth structure, wherein the flexible region allows the interlocking teeth structure formed on the first wall of the internal member to flex toward and away from the first wall of the external member (see figures 1-3). The sidewalls of the internal member have to be flexible in order to snap out of the interlocking position. In addition, the internal member includes a pair of arcuate slots/arcuate portions (see arcuate slots formed at 30) along the length of the internal member, wherein the slots define a flexible region in the internal member positioned adjacent the slots and between the internal base wall and each of the first and second internal wall to permit lateral displacement of the first and second internal walls (see figures 1-3).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette R. Reimers whose telephone number is (571) 272-7135. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR

AR

  
**EDUARDO C. ROBERT**  
**SUPERVISORY PATENT EXAMINER**